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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/940,539

08/29/2001

Michael M. Ramarge

08215-467001

4733

26171

7590

07/23/2004

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EXAMINER

EASTHOM, KARL D

ART UNIT

PAPER NUMBER

2832

DATE MAILED: 07/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/940,539	Applicant(s) RAMARGE ET AL. AX	
	Examiner Karl D Easthom	Art Unit 2832	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,5-20 and 22-104 is/are pending in the application.
- 4a) Of the above claim(s) 28-54 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 5-20, 22-27, and 55-104 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. Claims 95-96 and 103-104 are rejected under 35 U.S.C. 103(a) as obvious over Kester et al. in view of Suzuki et al. Kester discloses the claimed essentially invention except for the bonding. Suzuki discloses bonding adjacent rectifier stacks such as that of Kester to ensure a good electrical series connection, which would have been obvious given the same series connection of Kester and Donnola. Kester discloses the remaining elements of the claim at Figs. 9, and 11 with stack 12, 18, 12, and reinforcing structure 125, having epoxy resin and random fibers 126 as depicted. The 10kA, 10kV heavy duty rating allows the device to withstand a shorter pulse of 100kA, or "any size or rating" is disclosed at col. 4, lines 10-24, while the ANSI tests also disclose a 100kA test pulse, meeting the claims and claims 103-104, where such a rating would have been obvious given the desire to meet the ANSI tests.¹ In claim 96, see the fibers 125 at Fig. 9.

2. Claims 22-27, 66-93, and 99-100 are rejected under 35 U.S.C. 103(a) as obvious over Kester et al. in view of Donnola and Suzuki et al. Kester discloses the claimed essentially invention except for the pre-woven fabric and the bonding. Suzuki discloses bonding adjacent rectifier stacks such as that of Kester to ensure a good electrical series connection, which would have been obvious given the same series connection of Kester and Donnola. Donnola discloses the pre-woven fabric 310 for devices such as that of Kester to improve the reliability of such arrestors, at col. 3, where the type of fiber tape of Kester is stated as known at col. 3, lines 14-18, and it would have been obvious to employ a fabric having a mesh size to allow gas to escape

¹ The ANSI C62.11 standards cited at col. 9, lines 45-65 of Kester also include a 100kA short duration pulse test. See the Polymer Distribution articles cited, under the section Design Tests.

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as noted at col. 5, lines 5-15. The rating of several tens of kA meets the 100kA pulse limitation at col. 1, lines 20-27, where they withstand rms voltage of 1kV for example and thus are able to handle more energy than that of a limited pulse duration, which would have been obvious to employ to suit the application of high current relief. Or the heavy duty 10kA, rated 10kV devices of Kester can also inherently handle such a pulse of given limited duration since the same type of device as that including the reinforcing structure as that of applicant is employed, since it can handle the 10kA at 10kV, or the 100kA test as noted, at longer durations, or same is obvious where Kester discloses the invention at col. 4, lines 10-25 as suitable for any size or rating, where such a rating would have been obvious given the desire to meet the ANSI tests which have a 100kA test, see also footnote 1 above. In claims 25-27, the matrix is circumferentially and vertically applied due to the fibrous tapes 24 (vertical) or 28 (vertical and circumferential) are preimpregnated with resins 22 or 25-27. See col. 6, lines 34-50, disclosing the preimpregnation of the fibrous tapes. Similar remarks apply to claims 66-93 where employing the fabric of Donnola for one of the tapes 24 or 28 means fibers will go perpendicular, parallel, and at an angle to the axis, predetermined with respect to the winding thereof. The fibers 126 are shown at random at Fig. 9 for claims related to that element.

3. Claims 1, 3, 5-20, 55-65, and 97-98 are rejected under 35 U.S.C. 103(a) as obvious over Kester et al. in view of Donnola, further in view of Schmidt. Kester with Donnola discloses the claimed invention essentially as noted above, except for only one disc. Schmidt discloses at least one", and Kester discloses any number" or "any size or rating" at col. 4, lines 10-35, so that it would have been obvious to limit the device to one varistor in order to make the rating smaller or to limit the size, where such a rating would have been obvious given the desire to meet the

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ANSII tests which have a 100kA test. That is, the electrical apparatus is disclosed at col. 4, lines 25-35 as "relat[ed] to the coating" and "not limited to any particular ... number". Consequently the number one is contemplated for the disks, where one of skill would contemplate using the coating on one disk, meeting the claim, since the number one is included in the three devices of fig. 1. Schmidt also discloses using only one disk in a similar apparatus depicted as having three elements, disclosing explicitly at least one block" at col. 1, lines 40-50, so that it would have been obvious to employ only one block especially where the invention of Kester et al. is directed to the coating. For claims 2-4, see col. 4, lines 15-20. For claims 5-9, col. 6, lines 34-50 disclose fibers in the tape as strands so that they have predetermined and uniform length less than the length of the tape, where the tape is substantially equal to the array length. In claim 7, the random fibers 126 meet the claim. In claim 12, the tape 28 is circumferential. In claims 18-19, see tape 24. In claim 15, the angle of tape 28 is "approximately" at 10 degrees where the term is broadly construed. Or, it the fibers are at about 3 degrees with respect to the tape, where there is no frame of reference. The disc stack is bonded by the jackets or windings. For claims 97-98, see footnote 1 and other comments regarding Kester.

4. Claim 94, 101 and 102 are rejected under 35 U.S.C. 103(a) as obvious over Kester et al. in view of in view of Schmidt. Kester discloses the invention as noted with respect to claims 95-96 above, except the number one. This is noted as above as obvious for the reasons noted, incorporated here.

5. Applicant's arguments filed 1/22/4 have been fully considered but they are moot or are not persuasive. Applicant argues that the products of Kester as modified cannot withstand the pulse claimed. But this is not correct where the ANSI C62.11-1991 tests noted have the

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100kAtest pulse which the Kester products met, or it would have been obvious to make products meeting that test since it is a standard test, and the products have the same or similar structure.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl D Easthom whose telephone number is (571) 272-1989.

The examiner can normally be reached on M-Th, 5:30AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on (571) 272-1990. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Karl D Easthom
Primary Examiner
Art Unit 2832

KDE